



Monday, August 3

8:30 AM - 10:00 AM Opening Session - Prochnow Auditorium

8:30 **Welcome:** Professors Catherine Gehring and Nancy Johnson co-organizers of ICOM8; Professor Paul Umhoefer, Director of the NAU School of Earth Sciences and Environmental Sustainability; and Professor Michael Allen, President of the International Mycorrhizal Society

8:50 KN 1 **TRAPPE, J.** - *How we got where we are: tracking down the giants*

9:35 KN 2 **WHITHAM, T.G.** - *Integrating across scales from genes-to-ecosystems*

10:00 - 10:15 **Coffee break - Prochnow Atrium**

10:15 AM - 12:00 PM Symposium 1, sponsored by *Fungal Ecology* - Prochnow Auditorium

Diversity and biogeography of mycorrhizal fungi

Organized by: M. Öpik, University of Tartu, Estonia and K. Peay, Stanford University, USA

10:15 SY 1-1 **PEAY, K.G.**, J.M. Talbot, J.W. Taylor, R. Vilgalys and T.D. Bruns - *Patterns and drivers of ectomycorrhizal fungal diversity across scales*

10:35 SY 1-2 **LEOPOLD, D.R.** - *Nutrient availability influences the community composition of root-associated fungi from an ericoid host plant across a 4 myr chronosequence*

10:55 SY 1-3 **ÖPIK, M.** - *Biodiversity and diversity patterns of arbuscular mycorrhizal fungi*

11:15 SY 1-4 **SELOSSE, M.A.** - *Functional and taxonomic diversity of orchid mycorrhizal fungi*

11:35 SY 1-5 Mandyam, K. and **A. JUMPPONEN** - *Diversity and function of dark septate endophytes*

12:00 PM - 1:00 PM Buffet lunch - High Country Conference Center

1:00 PM - 1:50 PM Poster session 1 - High Country Conference Center Atrium

PS 1a: Diversity and biogeography of mycorrhizal fungi

PS 1b: Molecular methods for resolving the phylogenies of mycorrhizal fungi

PS 1c: Roles of mycorrhizal networks for individuals, communities and ecosystems

2:00 PM - 3:30 PM Lightning Talks 1 - Prochnow Auditorium

LT 1-1 **BIZABANI, C.** and J.F. Dames - *The diversity of ericaceous root fungi in South Africa: A comparative approach*

LT 1-2 **LEÓN, D.**, F. Masclaux, L. Villard, A. Rodriguez and I.R. Sanders - *Diversity of native arbuscular mycorrhizal fungi communities associated with wild cassava in two different landscapes in the Colombian Amazon*

LT 1-3 **KNAPP, D.G.**, P.J. Berek-Nagy, P.W. Crous, J.Z. Groenewald, I. Imrefi, G. Herczeg and G.M. Kovács - *Diversity of pleosporalean dark septate endophytic (DSE) fungi of semiarid areas*

LT 1-4 **ALVAREZ-MANJARREZ, J.** and R. Garibay-Orijel - *Diversity of ectomycorrhizal fungi from a Mexican tropical dry forest*

LT 1-5 **LEKBERG, Y.** - *Should we expect a positive relationship between plant and AMF richness?*

LT 1-6 Hawkins, B.J., J.M. Kranabetter, Tao Li and **M.D. JONES** - *Functional differences of Douglas-fir ectomycorrhizae along a natural nitrogen gradient*

LT 1-7 **ROSENDAHL, S.**, K.B. Nielsen, R. Kjølner, H.H. Bruun and T.K. Schnoor - *Colonization of new land by arbuscular mycorrhizal fungi*

LT 1-8 **SÁNCHEZ-GALLEN, I.**, A. Antoninka, L.V. Hernández-Cuevas and J. Álvarez-Sánchez - *Community of arbuscular mycorrhizal fungi and landscape fragmentation in a Mexican tropical rain forest*

LT 1-9 **NGUYEN, N.H.**, Z. Song, S.T. Bates, S. Branco, L. Tedersoo, J. Menke, J. Schilling and P.G. Kennedy - *FUNGuild: an open annotation tool for parsing high-throughput fungal molecular data by ecological guild*

LT 1-10 **EGAN, C.P.**, Y. Lekberg, A. Cornell, M. Settles, J.N. Klironomos and M.M. Hart - *Assessment of Illumina MiSeq dual end sequencing of arbuscular mycorrhizal fungal communities using mock communities of known DNA quantity*

LT 1-11 **GREBENC, T.**, G.M.N. Benucci, M. Karadelev, M.P. Martin and H. Kraigher - *Diversity and distribution of native truffle species (*Tuber spp.*) in Europe*

LT 1-12 **ALMEIDA, J.P.**, N. Rosenstock and H. Wallander - *The response of fungal communities to nitrogen and phosphorus fertilization in a spruce forest*

LT 1-13 **KONVALINKOVÁ, T.**, H. Gryndlerová, D. Püschel, V. Procházková, M. Gryndler and J. Jansa - *Arbuscular mycorrhizas increase resource competition within a model plant community*

LT 1-14 **DAUBOIS, L.**, D. Beaudet, M. Hijri and I. De La Providencia - *Independent mitochondrial and nuclear exchanges arising in Rhizophagus irregularis crossed isolates support the presence of a mitochondrial segregation mechanism*

LT 1-15 **SUKARNO, N.**, S. Listiyowati and K. Nara - *New species of ectomycorrhiza Elaphomyces associated with Dipterocarps Tropical Rain-forest from Indonesia*

3:30 PM - 4:00 PM Coffee Break - Prochnow Atrium

4:00 PM - 5:30 PM Concurrent Session 1 - High Country Conference Center, Agassiz/Fremont
Molecular methods for resolving the phylogenies of mycorrhizal fungi

4:00 CS 1-1 **STAJICH, J.E.**, M.C. Aime, M. Berbee, M. Binder, P. Crous, I.V. Grigoriev, D.S. Hibbett, T.Y. James, F. Martin, L.G. Nagy, J.W. Spatafora and the KFG Consortium - *Evolutionary genomics of early branches of the fungal tree*

4:15 CS 1-2 **GAZIS, R.** and D.S. Hibbett - *Fungi in the Open Tree of Life*

4:30 CS 1-3 **REDECKER, D.** - *Phylogeny of the Glomeromycota: advances and perspectives*

4:45 CS 1-4 **BOYCE, G.R.** and J.B. Morton - *Using proteomes of three Rhizophagus species in Glomeromycota to infer phylogenetic relationships*

5:00 CS 1-5 **SANCHEZ-RAMIREZ, S.** and J.M. Moncalvo - *Scaling macro- and micro-evolutionary dynamics of ectomycorrhizal fungi in space and time: the Caesar's mushrooms case*

5:15 CS 1-6 **ROSLING, A.**, G. House, W. Kaonongbua and J. Bever - *Speciation by hybridization in the Glomeromycota - Claroideoglomus candidum*

4:00 PM - 5:30 PM Concurrent Session 2 - Prochnow Auditorium
Roles of mycorrhizal networks for individuals, communities and ecosystems
Organizers: T. Horton, SUNY ESF, USA and David Johnson, University of Aberdeen, UK

4:00 CS 2-1 **BAHRAM, M.**, H. Harend and L. Tedersoo - *Insight into underlying mechanisms shaping local-scale distribution of ectomycorrhizal fungi by using network analysis*

4:15 CS 2-2 **WALDER, F.**, P.E. Courty, T. Boller, A. Wiemken and M. van der Heijden - *Mycorrhizal networks are shared by different plants under unequal terms of trade*

4:30 CS 2-3 **JOHNSON, D.**, Z. Babikova, J.A. Pickett, T. Bruce and L. Gilbert - *Mycorrhizal networks as conduits of inter-plant signals and drivers of multi-trophic interactions*

4:45 CS 2-4 **DESLIPPE, J.R.**, M. Hartmann, S.J. Grayston, W.W. Mohn and S.W. Simard - *Mycorrhizal networks of Cortinarius spp. and Betula nana facilitate warming-induced regime shift of Arctic tundra*

5:00 CS 2-5 **PEC, G.J.**, J. Karst, S.W. Simard and J.F. Cahill, Jr. - *Access to ectomycorrhizal fungal networks following a mountain pine beetle outbreak: effects on pine seedling growth and survival*

5:15 CS 2-6 **WEREMIJEWICZ, J.**, L. Sternberg and D.P. Janos - *Common mycorrhizal networks amplify competition through preferential ¹⁵N allocation to large host plants*

4:00 PM - 5:30 PM Concurrent Session 3 - High Country Conference Center, Rees/Doyle
Bridging palaeomycology and genomics of mycorrhizal fungi

Organizers: C. Strullu-Derrien, Natural History Museum, London UK and F. Martin, INRA, Nancy France

4:00 CS 3-1 **KENRICK, P.**, C. Strullu-Derrien and R. Mitchell - *The early evolution of roots and soils*

4:15 CS 3-2 **STRULLU-DERRIEN, C.**, P. Kenrick, J.P. Rioult and F. Martin - *Combining studies on fossils and genomics to understand mycorrhizal plant relationships*

4:30 CS 3-3 **TORRES-CORTÉS, G.**, S. Ghignone, P. Bonfante and A. Schüßler - *The genome of the widespread Mycoplasma-related endobacteria colonizing arbuscular mycorrhizal fungi reveals transkingdom horizontal gene transfer and extreme dependence on the fungal host*

4:45 CS 3-4 **LEAKE, J.R.**, J. Quirk, K.J. Field, J.G. Duckett, M.I. Bidartondo, R. Thorley, J.L. Morris, W.E. Stein, C.M. Berry and D.J. Beerling - *Evolution and functioning of mycorrhizas from liverworts to forests, pedogenesis to global impacts*

5:00 CS 3-5 **MURAT, C.**, A. Kohler, E. Morin, T. Payen, B. Henrissat, P. Wincker, A. Kuo, I.V. Grigoriev, D.S. Hibbett, Mycorrhizal Genome Initiative Consortium and F. Martin - *Comparative genomics of ectomycorrhizal basidiomycetes and ascomycetes provides new insights into the symbiosis evolution*

5:15 CS 3-6 **STÜRMER, S.L.** and J.B. Morton - *Phylogenetic perspective of biogeographic patterns in Glomeromycota*

6:00 - 7:30 Reception - North Union Patio

7:30 - 9:00 Public Lecture by Professor Tom Bruns - Prochnow Auditorium; *Forest fire and fungi: losers, winners, and strategies in the post-fire environment*

Tuesday, August 4

8:30 AM - 12:00 PM **Symposium 2**, sponsored by *New Phytologist* - **Prochnow Auditorium**
Linking mycorrhizal genomes, transcriptomes and proteomes to their function from individuals to ecosystems

Organizers: L. Lanfranco, University of Torino, Italy and A. Tunlid, Lund University, Sweden

8:30 KN 3 **FIRESTONE, M.K.** - *Integrating arbuscular mycorrhizas into the ecosystem ecology of soil microorganisms*

9:20 SY 2-1 **EZAWA, T.**, Y. Kikuchi, N. Hijikata, K. Yokoyama, R. Ohtomo, M. Kawaguchi, K. Saito and C. Masuta - *Towards a comprehensive understanding of the molecular mechanism of phosphate acquisition through the mycorrhizal pathway*

9:40 SY 2-2 **KOHLER A.**, C. Veneault-Fourrey, E. Morin, Y. Daguerre, S. Wittulsky, J. Ruytinx, C. Murat, J.M. Plett, E. Lindquist, K. Barry, A. Kuo, I.V. Grigoriev, F. Martin and the Mycorrhizal Genome Initiative Consortium - *The mycorrhizal genome initiative (MGI): exploring the transcriptomes of mycorrhizal fungi to understand the functioning of symbiosis*

10:00 - 10:30 Coffee Break - Prochnow Atrium

10:30 SY 2-3 Belmondo, S. and **L. LANFRANCO** - *Pathogenic versus mycorrhizal fungi: functional genomics tools to investigate fungal responses to strigolactones*

10:50 SY 2-4 **RINEAU, F.**, F.H. Shah, P. Persson, J.V. Colpaert, J. Vangronsveld and A. Tunlid - *Linking genomes, transcriptomes, and spectroscopy provides insights into the litter decomposing mechanisms in ectomycorrhizal fungi*

11:10 SY 2-5 **SCHMITZ, A.M.** and Harrison, M.J. - *Plant-secreted LysM proteins may play a role in defense suppression for maintaining symbiosis in arbuscular mycorrhizas*

11:30 SY 2-6 Malbreil, M., N. Tang, F. Martin, J.M. Ane, P.M. Delaux and **C. ROUX** - *The biology of arbuscular mycorrhizal fungi in the light of genomics*

12:00 - 1:00 Buffet lunch - High Country Conference Center

New Phytologist Meet the Editor – High Country Conference Center, Agassiz/Fremont

1:00 PM - 1:50 PM Poster session 2 - High Country Conference Center, Atrium

PS 2a: Linking mycorrhizal genomes, transcriptomes and proteomes to their function from individuals to ecosystems

PS 2b: Strategies to preserve and restore mycorrhizas for sustainable forestry

PS 2c: Inter-kingdom relationships: mycorrhizal microbiome and food web interactions

PS 2d: Novel mycorrhizas

2:00 PM - 3:30 PM Lightning Talks 2 - Prochnow Auditorium

LT 2-1 **BECQUER, A.**, K. Garcia, L. Amenc, S. Ruset, Y. Baeza, S. Zimmermann and C. Plassard - *The Hebeloma cylindrosporum phosphate transporter HcPT2 was involved in phosphate efflux at the fungus-plant interface*

LT 2-2 **TARKKA, M.T.**, F. Kurth, M. Bönn, F. Caravaca, L. Feldhahn, H. Maboreke, S. Mailänder, S. Herrmann, L. Ruess, S.D. Schrey and F. Buscot - *Protective effects of mycorrhiza helper bacterium against pathogens of pedunculate oak is mediated by induced defenses*

LT 2-3 **LI, Z.**, S. Dearth, Q. Yao, J. Uehling, H. Castro-Gonzalez, S. Campagna, G. Hurst, J. Labbé and C. Pan - *Integrated proteomics/metabolomics reveals carbon source, nitrogen source, and potential pathogenicity of an endobacterium of an endophytic fungus associated with Populus*

LT 2-4 **BOCAYUVA, M.F.**, C.A. Vieira, A.C.F Cruz, E.F. Freitas, T.G.R. Veloso and M.C.M. Kasuya - *Hadrolaelia jongheana, endangered orchid: symbiotic propagation study case*

LT 2-5 **DÍAZ-ARIZA, L.A.**, A.L. García Prieto, W.H. Sandoval, J.C. Duque Yate and A.M. Pedroza-Rodríguez - *Plant growth promoting fungi-PGPF associate with the ectomycorrhizal fungi Rhizopogon luteolus and Pinus caribaea roots*

LT 2-6 **KRANABETTER, J.M.** - *Diminished successional pathway or novel trajectory? Boreal ectomycorrhizal fungal communities 20 years after harvest-related disturbances of compaction and organic matter removal*

LT 2-7 **OWEN, S.M.**, L.C. Cottingham, C.A. Gehring, C.H. Sieg and P.Z. Fulé - *Long-term effects of high-severity wildfires on ectomycorrhizal fungal communities*

LT 2-8 **SMITH, M.E.**, Z.W. Ge, M. Reitman, R.H. Healy, T. Brenneman, G. Guevara and G.M. Bonito - *Elucidating biological complexity in pecan truffles (Tuber lyonii) and managed orchards of Pecan trees (Carya illinoensis) in the Southeastern USA*

LT 2-9 Lentendu, G., J. Schmidt, E. Schulz, F. Buscot and **T. WUBET** - *Co-occurrence network patterns of Medicago sativa rhizosphere microbiomes under soil nutrient pressure: cooperation or competition among symbiotic fungi and bacteria?*

LT 2-10 **CAMERON, D.D.**, R. Summers, E. Parker, H.B. Hughes, K.J. Field, S. Tille, M.M. Burrell, J. Ton, J.R. Leake and A.P. de Luque - *Mycorrhiza-induced pathogen resistance in wheat, more than the sum of its parts?*

LT 2-11 **SUZUKI, M.**, H. Shimura, C. Masuta, K. Tawaraya and T. Ezawa - *Metagenomic analysis of viromes in intercontinental isolates of Rhizophagus clarus suggests a long history of coevolution between glomeromycotan fungi and double-stranded RNA viruses*

LT 2-12 **SIKES, B.A.**, O.N. Lynch, B.L. Foster and K.A. Roccaforte - *Overlapping network structure between arbuscular mycorrhizal fungi, flowering plants, and their pollinators*

LT 2-13 **WILLIAMS, S.E.** and B. Heidel - *Mycorrhizal characteristics of a rare endemic in a hyper-arid, cryic environment*

LT 2-14 **RAY, P.**, Y. Guo, M. Chi and K.D. Craven - *A novel delivery system for the root symbiotic fungus, *Sebacina vermifera*, and consequent effects on growth of five different cultivars of wheat in two field locations*

LT 2-15 **MANOHARACHARY, C.** - *Diversity and taxonomy of arbuscular mycorrhizal fungi and their role in forestry and crop production*

3:30 - 4:00 Coffee Break - Prochnow Atrium

4:00 - 5:30 Concurrent Session 4 - Prochnow Auditorium

Strategies to preserve and restore mycorrhizas for sustainable forestry

Organizers: J. Álvarez-Sánchez, UNAM, Mexico and Håkan Wallander, Lund University, Sweden

4:00 CS 4-1 **ALARCÓN, A.**, R. Ferrera-Cerrato, A. Franco-Ramirez, A. Hernández-Ortega, M.E. Díaz-Martínez, L.V. Hernández-Cuevas, P.A. Quintanar-Isaias and F.T. Davies Jr. - *An overview about the study of arbuscular mycorrhizal fungi under petroleum hydrocarbon-contaminated systems in Mexico*

4:15 CS 4-2 **COWAN, A.D.**, J.E. Smith and S.A. Fitzgerald - *Recovering lost ground: soil burn intensity impacts on nutrients and ectomycorrhizal communities of ponderosa pine seedlings*

4:30 CS 4-3 **DAHLBERG, A.** - *Conservation of ectomycorrhizal fungi in boreal forests - the significance of retention forestry and the value of national red lists*

4:45 CS 4-4 **DUCOUSSO, M.**, C. Henry, A. Houlès, A. Razafimamonjy, P. Andrianaivomahefa, A. Leveau, L. Hannibal, F. Carriconde, H. Ramanankierana, M. Lebrun, M.A. Selosse and P. Jourand - *Mycorrhizal plant facilitation: a promising key tool for nickel mine site ecological restoration in Madagascar and New Caledonia*

5:00 CS 4-5 **GROVE, S.**, N.P. Saarman, G.S. Gilbert, K.A. Haubensak and I.M. Parker - *Forest restoration following exotic plant invasion: the role of ectomycorrhizal fungi at forest edges*

5:15 CS 4-6 **SHOTA, N.**, G. Qi, A. Tadanori and S. Norihiro - *Toward production of salt-tolerant hybrid strains of the ectomycorrhizal fungus *Rhizopogon roseolus* (=R. rubescens)*

4:00 - 5:30 Concurrent Session 5 - High Country Conference Center, Agassiz/Fremont
Inter-kingdom relationships - mycorrhizal microbiome and foodweb interactions

Organizers: A. Bennett, The James Hutton Institute, Scotland and M. Hart, University of British Columbia, Canada

4:00 CS 5-1 **BENNETT, A.E.** - *Can we make general statements about the effects of AM fungi on plant-insect interactions?*

4:15 CS 5-2 **CLOUTIER, V.**, J.A. Fortin, J. Ponchart, J. Bérubé, A. Desrochers and Y. Piché - *Micromammal consumption of hypogeous fungi in eastern Canadian boreal forests*

4:30 CS 5-3 **DESIRÒ, A.**, P. Bonfante and G. Bonito - *The fungal microbiome: a peek at plant-associated fungi and their endobacteria*

4:45 CS 5-4 **DICKIE, I.A.**, J.R. Wood, H.V. Moeller, T. Fukami and D.A. Peltzer - *The co-invasion of ectomycorrhizal plants and fungi: complex interactions with fungi, animals, plants, and soil biota*

5:00 CS 5-5 **LAMIT, L.J.**, P.E. Busby, M.K. Lau, Z.G. Compson, T. Wojtowicz, A.R. Keith, M.S. Zinkgraf, J.A. Schweitzer, S.M. Shuster, T.G. Whitham and C.A. Gehring - *Tree genotype mediates covariance among disparate communities, from ectomycorrhizal fungi to lichens, arthropods and more*

5:15 CS 5-6 **VAN DER HEIJDEN, M.G.A.**, C. Wagg, K. Schlaeppli, K. Hartman, S. Pellkofer, F. Bender, R. Wittwer and E. Verbruggen - *Linking soil biodiversity, mycorrhizal fungal diversity, and ecosystem multifunctionality*

4:00 - 5:30 Concurrent Session 6 - High Country Conference Center, Rees/Doyle
Novel mycorrhizas

Organizers: S. Bellgard, Landcare Research, New Zealand and S. Pressel, Natural History Museum, London UK; Moderator: S.E. Williams, University of Wyoming, USA

4:00 CS 6-1 **BRUNDRETT, M.** - *The global importance of mycorrhizas: scaling up from roots to continents*

4:15 CS 6-2 **TAYLOR, D.L.**, B. Sedillo, S.L. Fox and A. Enriquez - *Deconstructing mycoheterotrophic networks: narrowly specialized non-photosynthetic Corallorhiza orchids target abundant ectomycorrhizal fungi linked to diverse host trees*

4:30 CS 6-3 **FIELD, K.J.**, M.I. Bidartondo, W.R. Rimington, J.G. Duckett, D.D. Cameron, J.R. Leake and S. Pressel - *Comparative evolutionary physiology of Mucoromycotina and Glomeromycota symbionts in basal land plants*

4:45 CS 6-4 Padamseem, M., **R. JOHANSEN**, A. Stuckey, S.E. Williams, J.E. Hooker, B. Burns and S.E. Bellgard - *The arbuscular mycorrhizal fungi colonising root nodules of New Zealand kauri (Agathis australis)*

5:00 CS 6-5 **PRESSEL, S.** and J.G. Duckett - *The biology of fungal symbioses in lower land plants*

7:00 - 9:30 PM ICOM8 Banquet - High Country Conference Center Ballroom

Wednesday - Excursions ALL DAY

Thursday, August 6

8:30 - 12:00 Symposium 3, Sponsored by New Phytologist - Prochnow Auditorium
Mycorrhizal movement of matter and energy from crossing membranes to biogeochemical cycles

Organizers: R. M. Miller, Argonne National Laboratory, USA and F. A. Smith, University of Adelaide, Australia

8:30 KN 4 **P. BONFANTE** - *Arbuscular mycorrhizas: at the root of plant productivity*

9:20 SY 3-1 **KAISER, C.**, M.R. Kilburn, P.L. Clode, J.B. Cliff, Z.M.Solaiman, M. Koranda, L. Fuchslueger and D.V. Murphy - *Exploring the transfer of recent plant photosynthates to soil microbes via the mycorrhizal pathway*

9:40 SY 3-2 **CHAGNON, P.L.**, R.L. Bradley and J.N. Klironomos - *The structure of mycorrhizal interactions: the need for a mechanism-oriented approach to interpret community-level patterns*

10:00 - 10:30 Coffee Break - Prochnow Atrium

10:30 SY 3-3 **HASSELQUIST, N.J.**, D.B. Metcalfe, E. Inselsbacher, Z. Stangl, R. Oren, T. Näsholm and P. Högborg - *Greater carbon allocation to mycorrhizal fungi reduces tree nitrogen uptake in a boreal forest*

10:50 SY 3-4 **SMITH, J.M.**, M.D. Whiteside and M.D. Jones - *Unexpected effects of host nitrogen status on nitrogen distribution in a common mycorrhizal network*

11:10 SY 3-5 Zhang, L., F. Wang, F. Zhang and **G. FENG** - *AM fungal hyphae exudates can prime a bacterium mediated phytate mineralization in hyphosphere*

11:30 SY 3-6 **WATTS-WILLIAMS, S.J.**, I. Jakobsen, T.R. Cavagnaro and M. Grønlund - *Local and distal effects of arbuscular mycorrhizal colonisation on direct pathway Pi uptake and root growth in Medicago truncatula*

12:00 - 1:00 Buffet lunch - High Country Conference Center
Mycorrhiza Journal Student Workshop - High Country Conference Center, Agassiz/Fremont

1:00 - 1:50 Poster Session 3 - High Country Conference Center Atrium

PS 3a: Mycorrhizal movement of matter and energy from crossing membranes to biogeochemical cycles

PS 3b: Mycorrhizas and soil carbon sequestration

P3c: Strategies to manage mycorrhizas for sustainable agriculture

2:00 PM - 3:30 PM Lightning Talks 3- Prochnow Auditorium

LT 3-1 **NGWENE, B.**, J. Mertens, T. Spletstößer, E. Gabriel and E. George - *Influence of mineral nitrogen sources (NO_3^- -N vs. NH_4^+ -N) on arbuscular mycorrhiza development and N transfer in a Rhizophagus irregularis symbiosis*

LT 3-2 **PÜSCHEL, D.**, M. Janoušková, M. Hujšlová, R. Slavíková, H. Gryndlerová and J. Jansa - *Mycorrhizal benefits to Andropogon gerardii are greatly promoted by N fertilization*

LT 3-3 **BALDRIAN, P.**, M. Charvátová, T. Poláčková and M. Tomšovský - *The Gadgil effect may explain monodominance in tropical montane forest*

LT 3-4 **CUMMING, J.R.** and S. Desai - *Ectomycorrhizae mediate carbon sequestration under resource limitation in Populus*

LT 3-5 **CHEEKE, T.E.**, R.P. Phillips, A.L. Kuhn, A. Rosling, J.D. Bever and P. Fransson - *Mycelial production and standing fungal biomass are higher in temperate hardwood forests dominated by ectomycorrhizal trees than in forests dominated by arbuscular mycorrhizal trees*

LT 3-6 Fan, J.W., Z.M. Solaiman, B.S. Mickan, Y.L. Du, F.M. Li and **L.K. ABBOTT** - *Response of arbuscular mycorrhizal fungi to defoliation of ryegrass (Lolium rigidum) as a function of soil depth*

LT 3-7 **ALDRICH-WOLFE, L.**, R.J. Asheim, K.L. Black, E.D.L. Hartmann, P.G. Johnson, R.D. McGlynn, S.J. Redmond, L.C. Schmaltz and W.G. Shivega - *Effects of coffee farm management practices on arbuscular mycorrhizal fungal communities*

LT 3-8 **CICCOLINI, V.**, M. Öpik, E. Bonari and E. Pellegrino - *Arbuscular mycorrhizal fungal diversity in Mediterranean drained peaty soils is affected by host plant and intensification of agricultural land-use*

LT 3-9 **LI, M.** and A. Davis - *Impact of arbuscular mycorrhizal fungi on crop and weed growth: potential for conservation biocontrol of weeds*

LT 3-10 **HIJRI, M.** - *Large-scale field application of mycorrhiza-based inoculants, a sustainable solution for global food security*

LT 3-11 **REINHART, K.O.** - *Mycorrhiza effects on semiarid grassland community structure and species in the Northern Great Plains*

LT 3-12 **CHAUDHARY, V.B.**, A. Antoninka, J. Bever, J. Cannon, A. Craig, J. Duchicella, A. Frame, C. Gehring, M. Ha, M. Hart, J. Hopkins, B. Ji, N.C. Johnson, W. Kaonongbua, J. Karst, R. Koide, J. Lamit, L. McCormack, J. Meadow, B. Milligan, J. Moore, T. Pendergast, B. Piculell, B. Ramsby, M. Rúa, S. Simard, S. Shrestha, J. Umbanhowe, W. Viechtbauer, L. Walters, G.W.T. Wilson, P. Zee and J. Hoeksema - *MycoDB: a global database for mycorrhizal meta-analyses*

LT 3-13 **HOEKSEMA, J.D.**, J.D. Bever, S. Chakraborty, V.B. Chaudhary, E.A. Housworth, W. Kaonongbua, M.J. Lajeunesse, J.F. Meadow, B. Milligan, B.J. Piculell, M.A. Rúa, J. Umbanhowar, W. Viechtbauer and P.C. Zee - *A phylogenetic meta-analysis of biotic and abiotic factors affecting plant response to mycorrhizal fungi*

LT 3-14 **RÚA, M.A.**, A. Antoninka, P.M. Antunes, V.B. Chaudhary, C. Gehring, L.J. Lamit, B.J. Piculell, J. Bever, C. Zabinski, J.F. Meadow, M.J. Lajeunesse, B.G. Milligan, M. Gardes, J. Karst and J.D. Hoeksema - *Home-field advantage. Does the geographic origin of plants, mycorrhizal fungi and soil determine plant responses to mycorrhizal symbioses?*

LT 3-15 **WALLER, L.P.**, H. Maherali, Y. Lekberg, J.N. Klironomos, G.W.T. Wilson and J.L. Maron - *Getting to the root of species interactions: can we use plant functional traits to predict interactions with AM fungi?*

3:30 - 4:00 Coffee Break - Prochnow Atrium

4:00 PM - 5:30 PM Concurrent Session 7 - High Country Conference Center, Agassiz/Fremont

Mycorrhizas and soil carbon sequestration

Organizers: B. Lindahl, Swedish University of Agricultural Sciences, Uppsala, Sweden and M. Rillig, Freie Universität Berlin, Germany

4:00 CS 7-1 **FERNANDEZ, C.W.**, P.G. Kennedy and R.T. Koide - *Carbon quality and N concentration control the decomposition dynamics of ectomycorrhizal fungal necromass*

4:15 CS 7-2 **VERBRUGGEN, E.**, J. Jansa, E.C. Hammer and M.C. Rillig - *Arbuscular mycorrhizal fungi can stabilize root-litter carbon in soil*

4:30 CS 7-3 **FINZI, A.** - *Mycorrhizal fungi and coupled biogeochemical cycles at plot-to-global scales*

4:45 CS 7-4 **HAGENBO, A.**, A. Ekblad, J. Kyiashchenko, K. Clemmensen, B.D. Lindahl, R.D. Finlay and P. Fransson - *Production and turnover of extramatrical mycelium in a nemo-boreal Scots pine chronosequence*

5:00 CS 7-5 **HAMMER, E.C.**, M.C. Rillig and I. Jakobsen - *Mycorrhizas: pipeline or director of belowground C fluxes?*

5:15 CS 7-6 **LIU, Z.F.** and H. Wallander - *Mycorrhizal fungi as drivers for soil carbon and nitrogen accumulation on the volcanic island Surtsey, Iceland*

4:00 PM - 5:30 PM Concurrent Session 8 - Prochnow Auditorium ***Strategies to manage mycorrhizas for sustainable agriculture***

Organizers: H. Feng, Lanzhou University, China and C. Hamel, Agriculture and Agri-Food Canada, Canada

CS 8-1 **BENDER, S.F.** and M.G.A. van der Heijden - *Sustainable nutrient cycling through soil biota*

CS 8-2 **CAVAGNARO, T.R.**, S.J. Watts-Williams, T.M. Bowles and L.E. Jackson - *The role of arbuscular mycorrhizas in agriculture: insights from a mycorrhiza defective tomato mutant*

CS 8-3 **CHEN, B.D.**, D. Xiang, E. Verbruggen, Y.J. Hu, Y.L. Chen and M.C. Rillig - *Ecological drivers for the biodiversity of AM fungi in the farming-pastoral ecotone of northern China*

CS 8-4 **BAINARD, L.**, C. Hamel, B. Cade-Menun, P.L. Chagnon, K. LaForge and Y. Gan - *Dissecting the impact of land use on arbuscular mycorrhizal fungal communities in a semiarid prairie landscape*

CS 8-5 **ADHOLEYA, A.** - *Seed coating by AMF: understanding challenges and evaluating potential benefits in a few major crops*

CS 8-6 **PELLEGRINO, ELISA** - *The key role of the inoculation by arbuscular mycorrhizal fungi on field crops in the Mediterranean basin*

4:00 PM - 5:30 PM Concurrent Session 9 - High Country Conference Center - Rees/Doyle
Mycorrhizas as mutualists - what do mycorrhizas teach us about cooperation and host specificity?

Organizers: J. Hoeksema, University of Mississippi USA, N. Nguyen and P. Kennedy, University of Minnesota, USA

4:00 CS 9-1 **JL, B.** and J.D. Bever - *Plant preferential allocation and fungal reward decline with soil phosphorus: implications for evolution of the mycorrhizal mutualism*

4:15 CS 9-2 **FERNANDEZ, I.**, M.J. Pozo, S.C.M. van Wees, C.M.J. Pieterse and M.G.A. van der Heijden - *Arabidopsis-AM fungi, impossible relationship?*

4:30 CS 9-3 **LIAO, H.L.**, Y. Chen, T.D. Bruns, K.G. Peay, J.W. Taylor, S.Branco, J.M. Talbot, I. Grigoriev, K. Barry, D.W. Hoyt, C.D. Nicora, S.O. Purvine, K.H. Chen and R. Vilgalys - *Common and unique (host-specific) interactomes control ectomycorrhizal symbiosis between Pinus and Suillus*

4:45 CS 9-4 **ROY, M.**, H. Schimann, R. Braga-Neto, L. Fernandez, J. Hackel, S. Manzi, R.A.E. Da Silva, J. Duque, D. Frame, C. Decock and M.A. Neves - *Diversity, distribution, and specificity of ectomycorrhizal fungi in the Amazonian lowlands*

5:00 CS 9-5 **HYNSON, N.A.**, M.I. Bidartondo and D.J. Read - *Mycorrhizal specificity can lead to ecophysiological plasticity in plants living off fungi*

5:15 CS 9-6 **PLETT, J.M.**, A. Kohler, K.L. Plett, A. Livio, T. Tschaplinski, N. Engle, S. Piller, I.C. Anderson and F. Martin - *Picking partners: how transcriptomic, metabolomics, and proteomics work is shaping our understanding of ectomycorrhizal host specificity*

7:00 - 10:00 PM Wines of the World

Chuck-wagon and dance at the Museum Club on Historic Route 66

Buses will leave from the High Country Conference Center beginning at 6:30 PM

Friday, August 7

8:30 AM - 12:00 PM Symposium 4 -Prochnow Auditorium

Mycorrhizas and global change

Sponsored by BOTANY

Organizers: J. Karst, University of Alberta, Canada and C. Urcelay, Universidad Nacional de Córdoba, Argentina

8:30 KN 5 **TRESEDER, K.K.** - *Mycorrhizal fungi may mitigate ecosystem responses to global change*

9:20 SY 4-1 **ALLEN, E.B.** - *Impacts of nitrogen deposition and invasive species on arbuscular mycorrhizae and their functioning*

9:40 SY 4-2 **LILLESKOV, E.A.** - *Nitrogen deposition and mycorrhizal fungi of trees: past, present, and future*

10:00 - 10:30 Coffee Break - Prochnow Atrium

10:30 SY 4-3 **NUÑEZ, M.A.**, T.R. Horton, J. Hayward, R.D. Dimarco, M. Sorensen and D. Simberloff - *The role of ectomycorrhizal fungi in Pinaceae invasions: evidence from Isla Victoria, Argentina*

10:50 SY 4-4 **KARST, J.**, N. Erbilgin, G.J. Pec, P.W. Cigan, A. Narjar, S.W. Simard and J. Cahill, Jr. - *Ectomycorrhizal fungi mediate transgenerational cascades in beetle-killed pine forests*

11:10 SY 4-5 **KOOREM, K.**, O. Kostenko, B. Snoek, S. Geisen, K.S. Ramirez, R. Wilschut, M.M. Freixa and W.H. van der Putten - *Plants are expanding their range: does this affect their association with arbuscular mycorrhizal fungi?*

11:30 SY 4-6 Kim, Y.C., C. Gao, Y. Zheng and **L.D. GUO** - *Responses of AM fungal community to warming, nitrogen addition and increased precipitation in a semiarid steppe ecosystem*

12:00 - 1:00 Buffet lunch - High Country Conference Center

1:00 - 1:50 Poster Session 4 - High County Conference Center Atrium

PS 4a Mycorrhizas and global change

PS 4b: Diversity and biogeography of mycorrhizal fungi

2:00 PM - 3:30 PM Lightning Talks 4 - Prochnow Auditorium

LT 4-1 **STUTZ, J.C.** and A.O. Valencia - *Effectiveness of urban preserves in maintaining biodiversity of mycorrhizal fungi in desert ecosystems*

LT 4-2 **DUELL, E.B.**, G.W.T. Wilson and K.R. Hickman - *Above- and belowground responses of native and invasive prairie grasses to elevated temperatures and drought*

LT 4-3 **GONÇALVES, S.C.**, N. Mesquita, L. Bittleston, N. Vargas, I.A. Dickie, J. Geml and A. Pringle - *Potential distribution and identity of introduced Amanita muscaria worldwide*

LT 4-4 **KOHOUT, P.**, K. Štajerová, M. Hejda, R. Sudová, Z. Sýkorová, L. Tedersoo and P. Pyšek - *I'll scratch your back and you scratch mine: plant introductions as drivers and passengers of global ecology and geography of mycorrhizal fungi*

LT 4-5 **CEBALLOS, I.C.**, A. Rodriguez and I.R. Sanders - *Mass-produced genetically modified Rhizophagus irregularis alter cassava production in field*

LT 4-6 **QIN, H.**, H.L. Wang and Q.F. Xu - *Long-term fertilizer application effects on the soil, root arbuscular mycorrhizal fungi, and community composition in rotation agriculture*

LT 4-7 **SHAO, S.C.**, H. Huang, J. Gao, L. Qiang and Y. Hu - *Using symbiotic seed germination to restore over-collected medicinal orchids: the practice of "restoration-friendly cultivation" in Southwest China*

LT 4-8 **ORTAS, I.**, I.A.M. Ahmed, F. Göl and G. Koskeroglu - *Effect of different mycorrhizae species with and without biochar application plant growth*

LT 4-9 Nguyen, N.H., L. Williams, J.B. Vincent, J. Cavender-Bares, P.B. Reich and **P.G. KENNEDY** - *Guild-specific links between soil fungal diversity and plant phylogenetic diversity in a field-based tree experiment*

LT 4-10 **KRZNARICH, S.**, A. Antoninka, B.M. Stevens and N.C. Johnson - *Community patterns of arbuscular mycorrhizal fungal spores in the Serengeti*

LT 4-11 **HART, M.** - *Revisiting the Driver/Passenger Hypothesis along a successional gradient*

LT 4-12 **HENKEL, T.W.** and M.E. Smith - *Hosts, niches, and resources - drivers of ectomycorrhizal fungal diversity in tropical rainforests*

LT 4-13 **BITTERLICH, M.**, J. Gräfe and P. Franken - *Photosynthesis in mycorrhiza symbiosis: distinguishing between the impact of nutritional, hormonal, and stomatal responses on host photosynthesis*

LT 4-14 **SCHIEBOLD, J.M.I.**, M.I. Bidartondo, P. Karasch, B. Gravendeel and G. Gebauer - *Clades of mycorrhizal fungi differentiate isotope abundance patterns of partially mycoheterotrophic species in the orchid genus Epipactis*

LT 4-15 **RINI, M.V.** and M. Faria - *Time of inoculation determines the success of arbuscular mycorrhizal fungal symbiosis in oil palm (Elaeis guineensis Jacq.) seedlings*

3:30 - 4:00 Coffee Break - Prochnow Atrium

4:00 PM - 5:30 PM IMS Business Meeting, ICOM 9 Announcement and Student Awards - Prochnow Auditorium